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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/642,267

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Kenneth R Goguen

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EXAMINER

BARAN, MARY C

ART UNIT

PAPER NUMBER

2857

DATE MAILED: 04/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/642,267	Applicant(s) GOGUEN ET AL.	
	Examiner Mary Kate B Baran	Art Unit 2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 November 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The action is responsive to the arguments and amendments filed on 24 December 2003. Claims 1-9 are pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2 and 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Voigt et al. (U.S. Patent No. 5,623,598) (hereinafter Voigt) in view of Harrison et al. (U.S. Patent No. 6,128,717) (hereinafter Harrison).

Referring to claim 1, Voigt teaches a method for presenting system performance to a user in a mass storage system (see Voigt, Figures 5-7), the storage system having a plurality of disk drive storage elements (see Voigt, Figure 2, storage disks 32) controlled by a disk drive controller (see Voigt, Figure 2, "disk array controller 34" and column 3 lines 5-9), said controller receiving commands and data from (see Voigt, column 4 line 65 – column 5 line 5 and column 5 lines 14-38) and returning at least data to a host computer (see Voigt, column 6 lines 5-13), the method includes the steps: executing a test request by sending commands to said mass storage system (see Voigt,

column 5 lines 29-31), accumulating, at said executing host computer, data regarding performance of said mass storage system, in response to the requests sent by said host computer (see Voigt, column 5 lines 20-24), and presenting said accumulated data, in a graphical plot format (see Voigt, Figures 5-7), for enabling the visualization of trends in the performance of said mass storage system as a function of at least one selected parameter, in response to said host generated commands (see Voigt, column 6 lines 10-13 and lines 24-29). Voigt does not teach a controller connected to a plurality of host computers.

Harrison teaches a controller (i.e. interface structure 14) which is connected to plurality of host computers (i.e. network environment 12) (see Harrison, column 7 lines 3-11 and Figure 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was to modify Voigt to include the teachings of Harrison because providing performance data for a plurality of hosts can enhance the overall performance of the storage system (see Harrison, column 5 lines 46-53).

Referring to claim 2, Voigt further teaches the method wherein the parameter is time (see Voigt, column 6 lines 5-6).

Referring to claim 5, Voigt further teaches the method wherein said presenting step displays said data on a computer display in said graphical format (see Voigt, column 6 lines 10-13 and Figures 5-7).

Referring to claim 6, Voigt further discloses the method wherein said method further comprises selecting at least one test phase for viewing in said graphical plot format (see Voigt, column 6 lines 29-33 and Figures 5-7).

Referring to claim 7, Voigt further teaches displaying, in association with said graphical plot format, parameters relating to the graph (see Voigt, column 6 lines 33-36 and Figures 5-7).

Referring to claim 8, Voigt further teaches parameters which include at least one of the nature of the test, the size of data blocks which have been used, and the number of data points (see Voigt, column 5 lines 1-5).

Referring to claim 9, Voigt further teaches enabling a user to display multiple graphs on a single sheet (see Voigt, Figure 7).

3. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Voigt et al. (U.S. Patent No. 5,623,598) (hereinafter Voigt) in view of Harrison et al. (U.S. Patent No. 6,128,717) (hereinafter Harrison) and further in view of Oshelski et al. (U.S. Patent No. 5,586,059) (hereinafter Oshelski).

Referring to claim 3, as noted above Voigt and Harrison teach all but a method wherein said accumulating step accumulates said data in a plurality of databases, and said method further comprises selecting one of said databases for viewing.

Oshelski teaches extracting data and storing the data in a plurality of databases (see Oshelski, column 5 lines 44-47) and accessing these files to analyze and display in user-specified formats which include charts and graphs (see Oshelski, column 5 lines 30-40).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the teachings of Voigt in view of Harrison and in further view of Oshelski to make the requested data easier to access and faster to plot.

Referring to claim 4, as noted above Voigt and Harrison teach all but a method wherein said presenting step prints said data in said graphical plot format.

Oshelski discloses printing data (see Oshelski, column 6 lines 17-20) in a user-selected format, which includes charts or graphs (see Oshelski, column 5 lines 37-40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the teachings Voigt in view of Harrison and in further view of Oshelski to provide the user with a hard copy of the performance data in case of system error or for publication.

Response to Arguments

4. Applicant's arguments filed 24 December 2003 have been fully considered but they are not persuasive.

Applicant argues that Voigt does not disclose a disk drive controller receiving commands and data from and returning at least data to a plurality of host computers;

executing at a plurality of host computers a test request by sending commands to the mass storage system; or accumulating, at the executing host computers, data regarding performance of the mass storage system in response to the requests sent by the host computers. Applicant's arguments are not well taken. Voigt teaches a disk drive controller (i.e., disk array controller 34), which receives commands [through the controller firmware (see Voigt, column 5 lines 14-34)] and data from (see Voigt, column 5 lines 34-38) and returning data (i.e., performance history) to a host computer (see Voigt, column 6 lines 5-13); executing at a host computer a test request by sending commands to the mass storage system (see Voigt, column 5 lines 14-34); and accumulating at a host computer data regarding performance of the mass storage system in response to a request sent by a host computer (see Voigt, column 6 lines 5-13). Voigt does not teach a plurality of host computers; however, Harrison does teach a plurality of host computers (see Harrison, column 7 lines 3-11 and Figure 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Voigt to include the teachings of Harrison because providing performance data for a plurality of hosts can enhance the overall performance of the storage system (see Harrison, column 5 lines 46-53).

Applicant has asked that the Examiner discuss how Harrison explains what performance data is collected, how this performance data relates to multiple hosts as opposed to a single host, and how the data would enhance the overall performance of a storage system. Harrison teaches that the performance data collected is different information and statistics about the data object, such as number of objects accessed by

the host since disk drive initialization and total storage space already used (see Harrison, column 12 lines 39-65); this performance data relates to either the host requesting the data [i.e. number of objects accessed by the host (see Harrison, column 12 lines 41-42)] or the entire network which has access to the storage [i.e. total storage space already used (see Harrison, column 12 lines 42-43)]. Finally, this data is used to determine a storage strategy (see Harrison, column 11 lines 22-49), and optimize the storage usage and access (see Harrison, column 12 lines 13-15). Therefore, the Harrison reference does relate to optimization of performance in a mass storage system.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

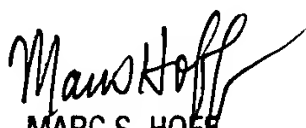
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary Kate B Baran whose telephone number is (571) 272-2211. The examiner can normally be reached on Monday - Friday from 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S Hoff can be reached on (571) 272-2216. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MKB


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